

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claim 1 is hereby amended. No new matter has been added.

Claims 1-13, 15-18, 20-21, 23, 28-31, 42-59, 61-62, 64, and 69-76 were rejected as being anticipated by Duong et al. (US 6,740,518). Applicants traverse this rejection. The Examiner stated that "changes made to 35 U.S.C. 102(e) by the American Inventors Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under U.S.C. 102(e) prior to the amendment by the AIPA." The Applicants do not concede that this statement applies to Duong et al., as the reference does not result from an international application. Rather, it is a continuing application of U.S. 60/100,730, filed Sep. 17, 1998, which occurs after the April 20, 1998 priority date of the current application. Please find enclosed a verified translation of the priority document 98 04924 filed in France on April 20, 1998. Therefore, the rejection is rendered moot. Applicants are not conceding the relevance to Duong et al. as applied to the rejected claims. Favorable reconsideration of claims 1-13, 15-18, 20-21, 23, 28-31, 42-59, 61-62, 64, and 69-76 is requested.

Please note that, the listed filing date of February 13, 2001 reflects the 102(e) bar date, namely the date on which all missing requirements were received by the Office. The Applicants would like to note that the date of deposit of these items is February 6, 2001. Please see the enclosed return postcard. Even a filing date of February 6, 2001 does not reflect the timely filing date of the October 13, 2000 Preliminary Amendment. The Preliminary Amendment was filed within the required 18 months of the PCT filing date of April 19, 1999. Therefore claiming priority back to the 98 04924 French filing of April 20, 1998 is valid.

Claims 1-23, 28-35, 42-64, and 69-72 were rejected as being anticipated by Benveniste et al. (J Allergy Clin Immunol., vol. 99 (1), part 2, pp S175, 1997). Applicants traverse this rejection. The Benveniste reference discloses a method of digitally acquiring signals when recorded during 1 sec, on 16 bits and at a maximum frequency of 22 kHz. The signals are representative of a biologically active element from a solution including the biologically active element, by digitizing the signals, by transferring the signals and replaying them **to water** in order to provide to this water a biological activity corresponding to the molecular activity of the biologically active element.

It is neither disclosed nor suggested to replay signals representative of a biologically active element (i.e. signals produced or acquired from at least one of said ligand and said receptor) to a solution including:

- ❑ molecules of the active element, for example a ligand of a ligand/receptor pair,
- ❑ molecules of an element susceptible to react with said active element, for example the receptor of the pair, or
- ❑ molecules of the active element and its reagent.

Such a replay is used, according to claims 1 and 42, to amplify the reaction between the active element and its reagent. Such a feature is not disclosed nor suggested in the Benveniste reference. Rather, Benveniste teaches a single amplification which, prior to the application of the signal to water, is an amplification of signals representative of a biologically active element. Benveniste discloses the acquisition of signals representative of a biologically active element and their application to water only. There is neither disclosure nor suggestion to use such signals as required by claim 1, where a solution of ligand and/or receptor is submitted to a signal representative of a biologically active element in order to amplify the reaction between said ligand and said receptor.

The excitation field of claims 1 and 42, used for acquisition, is not disclosed by Benveniste. Please note that the "excitation signal" of claim 1 "having a frequency between about 20 Hz and about 20,000Hz" is not a signal representative of a biologically active element. Rather, it generates a field useful for the acquisition of a signal from the ligand or receptor. The resulting acquired signal is the signal representative of the biologically active element.

Further, while the Benveniste reference does teach that "signals from Ovalbumin are digitally amplified" and "EM radiation under 22 kHz can be digitized", it does not suggest that the biological element is exposed to EM radiation while recording signals that are then amplified. The Benveniste reference does not disclose that such amplified signals representative of the biologically active element are then applied to a solution of molecular ligand and/or receptor in order to enhance the reaction, as required by claim 1.

The Benveniste reference discloses that hearts from Ova-immunized guinea-pigs are perfused with the following solutions:

- ❑ dW: a solution of naïve water that was submitted to a signal acquired from only water. This solution does not include any molecular Ovalbumin.
- ❑ dOva: a solution of naïve water that was submitted to a signal acquired from a solution of Ovalbumin. This solution does not include any molecular Ovalbumin.
- ❑ W: naïve water.
- ❑ Ova: a solution of molecular Ovalbumin.

No solution of molecules of reagents (in the guinea-pig hearts and Ova) are submitted to any signal representative of one of the reagents. Therefore, none of the four listed solutions is a solution of ligand (or receptor) to which was applied a signal representative of a biologically active element, as is required by claims 1 and 42.

Favorable reconsideration of claims 1-23, 28-35, 42-64, and 69-72 is requested. Claims 2-23, 28-35, 43-64, and 69-72 depend directly or indirectly from claims 1 and 42.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, John J. Gresens, Reg. No. 33,112, at (612)371-5265.

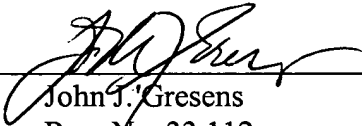


Respectfully submitted,

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